

PROCEEDINGS
OF THE
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DESCRIPTIONS OF NEW SPECIES OF ACORIDIUM
FROM THE PHILIPPINES.*

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The following list of new orchids is based on recent collections made in the Philippine Islands. I have divided the species into two sections, designating as *Euacoriidium* all those species which lack lateral arms of the column, and designating as *Platyclinis* all those which have such arms. The former section is represented in the Philippines by more species than the latter and is based on *Acoridium tenellum*, Nees & Meyen. Unless otherwise specified, the type specimens are in the herbarium of the Bureau of Science, Manila, and duplicate types are in my own herbarium. They will all be illustrated in the serial *Orchidaceae*, issuing from the Ames Botanical Laboratory.

§ 1. EUACORIDIUM.

***Acoridium Williamsii* sp. nov.**

Pseudobulbi caespitiosi, fusiformes; folia linearia, setaceo-triangularia; pedunculi quam foliis breviores; flores distichi; sepala lateralía ovato-lanceolata, acuta, 3-nervia; petala rhombiformi-oblancoolata, acuta, 3-nervia; labellum 3-callosum, 3-lobatum, lobis lateralibus oblongo-falcatis, obtusis, lobo medio oblongo obtuso.

Grass- or rush-like tufted plants, in habit very similar to *A. tenellum*, Nees & Meyen. Pseudobulbs approximate, clustered, fusiform, 7.5 cm. long, tapering from a slender base. Sheaths elongated, tubular, maculate, acute, closely appressed to the pseudobulb. Leaf linear, triangular in cross section, 25 cm. long, about 1 mm. thick, acute. Peduncle filamentous, somewhat shorter than the leaf, from near the summit of which it appears to arise, being for the most part enclosed by it. Inflorescence slender, about 7 cm. long, 5 mm. through. Bracts glumaceous, longer than the ovary, 2 mm. long. Flowers 2-3 mm. apart, in 2 rows, greenish-white, forming a graceful pendulous raceme. Lateral sepals ovate-lanceolate, acute, 3-nerved, 3 mm. long, 1.5 mm. wide. Upper sepal narrower, oblong, 3 mm. long, 1 mm. wide. Petals rhombic-oblancoolata, acute, 3-nerved, about 3 mm. long, 1 mm. wide. Lip 3-lobed or trifid; lateral divisions

* Contributions from the Ames Botanical Laboratory, No. 5.



largest, oblong-falcate, obtuse, with a minute callus at the base of each near the sinus formed with the oblong, obtuse, middle lobe, which is 1 mm. long. Column much like that of *A. tenellum* Nees & Meyen. Fruit not seen.

Type in Herb. New York Botanical Garden, from Trinidad, Prov. Benguet, northern Luzon, September 28, 1904 (growing on rock), R. S. Williams (No. 1939).

An interesting addition to the grass-leaved division of *Euacoriidum*, of which, heretofore, *A. tenellum* and *A. sphacelatum* were the only known representatives. From both of these species it is at once distinguished by its stricter habit, thicker, triangular leaves, larger flowers, and very different lip. The flowers at the summit of the raceme begin to expand first, a character which does not hold in *A. tenellum*, *A. sphacelatum* or *A. graminifolium*, in all of which species the lowermost flowers are the first to bloom.

***Acoridium graminifolium* sp. nov.**

Pseudobulbi fusiformes; folia linearia, acuta; pedunculi quam foliis breviores; flores distichi; sepala lateralialia lanceolata, acuta, 3-nervia, ad apicem paulo conduplicata; petala lanceolata, acuta, 3-nervia; labellum 3-callosum, 3-lobatum, lobis lateralibus oblongis, ad apicem latioribus, ad basim auriculatis, lobo medio oblongo, mucronato.

Affinity with *A. tenellum* Nees & Meyen. Tufted grass-like epiphytes, with yellow fragrant flowers which turn deep reddish brown when dry. Pseudobulbs stem-like, fusiform, 7-8 cm. long, strongly grooved when old, clothed with elongated, tubular, maculate, acute, closely appressed sheaths, the fibrous remains of which persist. Leaves grass-like, linear, prominently nerved, with a conspicuous mid-rib, at the base contracted into an elongated petiole, above flat, 30 cm. long, 2.5-3 mm. wide, acute. Peduncles filamentous, shorter than the leaves, from near the summit of which they appear to arise, and to the face of which they adhere lightly for a part of their length. Inflorescence 4.5-5 cm. long, 8-10 mm. through, bracts glumaceous, clasping the flowers, about 2 mm. long. Flowers about 2 mm. apart in a rather dense, distichous raceme. Lateral speals lanceolate, acute, 3-nerved, slightly conduplicate at the apex, 4.5 mm. long, 2 mm. wide. Upper sepal similar to the laterals, narrower, about 4 mm. long. Petals lanceolate acute, 3-nerved, broadly clawed, 3 mm. long, about 1.5 mm. wide. Lip 3-lobed, E-shaped; lateral lobes oblong, broadened toward the end, with an auricular or rounded lobe at the base on the outer margin; middle lobe or division oblong, with a sharp mucro at the tip, with a thickened, transverse ridge at the base, which passes into two truncate calli, one at the base of each lateral lobe. In the depression at the center of the lip is a minute callus on the median nerve. Column less than 1 mm. long, stout, similar to the column of *Acoridium tenellum* Nees & Meyen.

Type from between Suyoc and Panai, Prov. Benguet, Luzon, alt. 6,500 feet. October-November, 1905, E. D. Merrill (No. 4764); additional material from Mt. Data, Distr. Lepanto, Luzon, November, 1905, E. D. Merrill (No. 4594).

In *Acoridium graminifolium* we have an interesting and instructive tran-

sition between the filamentous-leaved *A. tenellum* and the broad-leaved *A. venustum* and *A. pumilum* forms of the section *Juacoridium*. The fleshy flowers, which are nearly opaque, and the very complex lip of *A. graminifolium* distinguish it very clearly from its near allies. The character of the lip is worthy of special attention as the structure of the calli is more like that of the calli of *A. venustum* and its allied species than like the calli of *A. tenellum*, thus forming a striking transition between the two groups.

***Acoridium tenuifolium* sp. nov.**

Pseudobulbi fusiformes; folia linearia, attenuata, acuta; pedunculi quam foliis breviores; sepala lateralia triangulari-lanceolata, acuta, 1-nervia; petala lanceolata, 1-nervia; labellum 3-lobatum, 3-callosum, lobis lateralibus valde elongatis, oblongis, obtusis, 1-nerviis, lobo medio minuto.

Pseudobulbs fusiform, slender, 1.5–2.5 cm. long, monophyllous. Leaves linear, acute, with a prominent mid-rib, 3–12 cm. long, 2–4 mm. wide, contracted below into a slender petiole 1.5 cm. long. Peduncle exceeded by the leaf, flexuose, 3.5–5.5 cm. long to the lowermost bract of the inflorescence, bracts 2 mm. long, longer than the ovary. Flowers white, less than 2 mm. apart. Lateral sepals triangular lanceolate, 1-nerved, acute, 3 mm. long, 1 mm. wide. Upper sepal 3 mm. long, similar to the laterals. Petals lanceolate, 1-nerved, 2 mm. long. Lip minute, 3-lobed with relatively long lateral lobes, which are erect, oblong, obtuse, and diverted forward, at right angles to the column; the saccate middle lobe, which is fleshy and provided with a pitcher-like tip at the apex, passes at its basal margin, or rim, into thickenings, or calli, one on each side at the sinus formed by the lateral and middle lobe; lateral lobes from sinus to apex, 1 mm. long, 1-nerved.

Type from Mt. Data, Distr. Lepanto, Luzon, alt. 7,000 ft., epiphyte in rain forest, October 29, 1905, Elmer D. Merrill (No. 4576).

While *Acoridium tenuifolium* is closely allied to *A. tenue* and *A. parvulum*, it is very distinct from both, and well characterized by its oblong, 1-nerved lateral lip-lobes and by its acute, attenuated leaves.

***Acoridium tenue* sp. nov.**

Pseudobulbi fusiformes; folia lineari-oblonga, obtusa; pedunculi quam foliis cum petiolis breviores, vel interdum longiores; sepala lateralia lineari-lanceolata, acuminata, acuta, 3-nervia; petala lineari-lanceolata, acuminata, acuta; labellum 3-lobatum, 3-callosum, lobis lateralibus lunatis, sub-acutis, lobo medio 3-dentato, dentibus lateralibus magis rotundatis, obtusis vel sub-acutis.

Whole plant when in flower 12–18 cm. high, slender throughout. Pseudobulbs 1.5–2.2 cm. long, fusiform, when immature concealed by the tubular, nervose, acute sheaths. Leaves linear-oblong, obtuse, with a minute indentation on the margin on each side above the middle, prominently 3-nerved, 3–6 cm. long, 2–4.5 mm. wide. Petioles slender, 1 cm. long. Peduncles filiform, shorter than the leaf and petiole or sometimes slightly longer, 4.5–8 cm. long. Bracts longer than the ovaries, erose-den-

tate on the margin, 2 mm. long. Flowers 2 mm. apart, in slender, graceful, flexuose racemes. Racemes 2.7–6.3 cm. long. Lateral sepals linear-lanceolate, acuminate, acute, 3-nerved, 3 mm. long, 0.9–1 mm. wide. Upper sepal similar to the laterals. Petals narrowly lanceolate, acuminate, acute, 2.5 mm. long. Lip 3-lobed; lateral lobes diaphanous, semi-crescent-shaped, sub-acute, with a free callus-like appendage at base on the inner margin of each; middle lobe 0.5 mm. long, tridentate, the lateral teeth rounded, obtuse or sub-acute; near the base of the lip on the median line is a minute tubercle or callus. Column minute, similar to that of *A. tenellum* Nees & Meyen.

Type from the trail to Mt. Apo, Mindanao (growing on mossy trees), April 19, 1904, E. B. Copeland (No. 1019a); additional material from Lamao River, Mt. Mariveles, Prov. Bataan, Luzon, October, 1903, Elmer D. Merrill (No. 3217a).

Acoridium tenue in habit forms a connecting link between the grass-leaved *A. graminifolium* and the broad-leaved *A. venustum*. The lip, however, is more like the lip of *A. tenellum*.

Acoridium parvulum sp. nov.

Herbae minutae; folia lineari-oblonga, obtusa, truncata; pedunculi quam foliis longiores; sepala lateralia lanceolata, acuta, 1-nervia; petala lanceolata, acuta, 1-nervia; labellum 3-lobatum, 2-callosum, lobis lateralibus oblongo-falcatis, obtusis, lobo medio retuso-mucronato.

Affinities with *A. tenue*. Whole plant not exceeding 8 cm. in height. Pseudobulbs monophyllous, 4–10 mm. long, clothed with tubular acute sheaths. Leaves linear-oblong, obtuse, truncate, prominently 3-nerved, 2–3.5 cm. long, 2–2.5 mm. wide. Peduncles very slender, slightly longer than the leaves, 3–4 cm. long. Raceme graceful, 1.5–2 cm. long, about 3 mm. through. Bracts acute, longer than the ovary, 1.5 mm. long. Flowers when spread out 4 mm. across. Lateral sepals lanceolate, acute, 1-nerved, 2.5 mm. long, about 1 mm. wide. Upper sepal similar to the laterals, about 3 mm. long. Petals lanceolate, acute, 2 mm. long, 1-nerved. Labellum 1.25 mm. wide, 3-lobed; lateral lobes oblong-falcate, rounded at the apex, erect, clasping the column; middle lobe broader than long, the apex retuse, mucronate. From the inner basal margin of each lateral lobe a thickening, callus-like in its nature, extends to the middle of the middle-lobe, where the two thickenings become confluent. Column minute, with a protuberance in front.

From Lamao River, Mt. Mariveles, Prov. Bataan, Luzon, October, 1903, Elmer D. Merrill (No. 3217b).

Acoridium parvulum, which is the smallest member of the genus known to come from the Philippine Islands, resembles closely *A. tenue*, though this is a larger species, with longer leaves, more slender, longer pseudobulbs, longer racemes and narrower, 3-nerved sepals. The leaves of *A. parvulum* do not taper at the base so abruptly as those of *A. tenue*. No. 3217 of Merrill's collections consists of a mixture of *A. parvulum* and *A. tenue*.

***Acoridium venustum* sp. nov.**

Pseudobulbi fusiformes; folia lineari-oblancoolata; sepala lateralialate ovata, acuta, 1-nervia; sepalum superius lanceolatum, acutum; petala falcata, lineari-lanceolata, acuta; labellum 3-lobatum, 3-callosum, lobis lateralibus ovato-falcatis, obtusis, lobo medio emarginato-mucronato.

Pseudobulbs fusiform, 2 cm. long, monophyllous; leaves linear-oblancoolate, 6-7.5 cm. long, 5-8 mm. wide, rounded at the tip, acute. Petiole 5-10 mm. long, slender. Peduncle 5-7 cm. long, very slender, flexuose, with several imbricating bracts below the inflorescence. Inflorescence 5-7 cm. long, about 5 mm. through, densely many-flowered. Pedicels about 2 mm. apart. Bracts much longer than the ovary, ovate from a broad base, glumaceous, obtuse, 2.5 mm. long. Flowers small, dull yellow, in two rows, forming a graceful drooping raceme. Lateral sepals broadly ovate, acute, 1-nerved, 3 mm. long, 1.5 mm. broad. Upper sepal lanceolate, acute, considerably narrower than the laterals, similar to the 1-nerved, somewhat falcate, linear-lanceolate, acute petals, which are 3 mm. long. Lip minute, somewhat saccate, 3-lobed, from base to tip of midlobe 1 mm. long, about 2 mm. wide; lateral lobes broadly ovate-falcate, obtuse with a thickened, partly free callus at the base of each; middle lobe deeply emarginate, mucronate; sac or depression oblong, with a minute, rounded, keel-like callus in the middle of the bottom. Column minute, 1 mm. long, with a protuberance in front.

From Mt. Santo Tomas, Prov. Benguet, Luzon, May 7, 1904, A. D. E. Elmer (No. 6273).

***Acoridium strictiforme* sp. nov.**

Pseudobulbi fusiformes; folia lineari-oblonga, marginata, acuta; sepala lateralialate lanceolata, acuta, 1-nervia; petala lineari-lanceolata, acuta, 1-nervia; labellum 3-lobatum, 3-callosum, lobis lateralibus falcatis, obtusis, lobo medio 3-lobato.

A compact epiphyte about 6 cm. high, with a dense distichous inflorescence of white fragrant flowers. Pseudobulbs fusiform, 1-1.5 cm. long, rugose when dry, monophyllous. Leaves linear-oblong, shortly petioled, coriaceous, acute, 2.5-4 cm. long, 3-5 mm. wide, prominently 3-nerved, the outer nerves marginal, giving the leaves a marginate aspect (at least when dry). Petiole about 3 mm. long. Peduncle shorter than or equalling the leaf, rather strict, filiform. Inflorescence 1.5-2 cm. long, 4-5 mm. through, densely flowered. Bracts broadly ovate, obtuse, erose, dentate on the margin, 2.5 mm. long, exceeding the ovary and clasping the base of the perianth. Lateral sepals lanceolate, acute, 1-nerved, 3 mm. long, less than 1.5 mm. wide; upper sepal similar to but narrower than the laterals. Petals linear-lanceolate, acute, 1-nerved, 3 mm. long, slightly less than .75 mm. wide. Lip 3-lobed, with large falcate, obtuse, diaphanous lateral lobes, 1 mm. long, and with a minute trilobed middle lobe which is fleshy and passes into fleshy calli, situated one on each lateral lobe, on the inner margin near the base; on the median line a minute papilla. Column, with a rostellar process protuberant from the front. Anther very large in proportion to the size of the minute column.

From between Suyoc and Panai, Prov. Benguet, Luzon, October–November, 1905, E. D. Merrill (No. 4854).

This very distinct species is distinguished from its near allies, *A. tenue* and *A. parvulum*, by the very narrow 1-nerved petals, by its strict, almost rigid habit, and by its acute leaves.

***Acoridium anfractum* sp. nov.**

Pseudobulbi oblongi; folia oblonga, acuta vel obtusa, apiculata; pedunculi quam foliis longiores; rachis anfracta; sepala lateralia lanceolata, acuta, 3-nervia; sepalum dorsale elliptico-oblongum; petala obovata, 3-nervia, ad apicem margine erosa; labellum 3-lobatum, lobis lateralibus ad apicem reflexis, lobo medio retuso, mucronato.

Pseudobulbs oblong, 1–3 cm. long, when immature clothed with densely maculate sheaths. Leaves 6–7 cm. long, 7–9 mm. wide, prominently 3-nerved, acute or obtuse, apiculate. Petioles, about 1 cm. long. Peduncle longer than the leaf, with several closely imbricating bracts below the inflorescence. Bracts ovate from a broad base, entire, 6 mm. long, longer than the ovary. Rachis of the inflorescence strongly zig-zag, each internode forming a right-angle with its subtending bract. Flowers 8–9, large for the section, 5–6 mm. apart, brownish-red in a loose raceme. Lateral sepals 6 mm. long, 3 mm. wide, lanceolate, acute, 3-nerved. Upper sepal elliptico-oblong, 6 mm. long, 3 mm. wide. Petals obovate, 5.5 mm. long, 4 mm. wide, somewhat erose on the margin near the tip, 3-nerved, the lateral nerves branched. Lip 4 mm. wide, 3-lobed. Lateral lobes 2.5 mm. long, apex acute, reflexed. Middle lobe retuse-mucronate, acute; margin on each side of the mucro thickened into callus-like protuberances, from each of which a conspicuous vein runs back to the tuberculate or emarginate calli situated one on each side of the disc near the base. Column stout, apex behind the anther crenulate.

From Mt. Data, Distr. Lepanto, Luzon, alt. 7,000 ft., epiphyte, October 20, 1905, Elmer D. Merrill (No. 4482).

Acoridium anfractum is most nearly allied to *A. pumilum* Rolfe, from which it differs in the outline and calli of the lip, in the venation of the petals, and in the very conspicuously zig-zag rachis of the larger-flowered raceme.

***Acoridium recurvum* sp. nov.**

Pseudobulbi recurvati, fusiformes; folia lineari-oblonga, acuminata, apiculata; flores distichi; sepala ovata, obtusa, 3-nervia; sepalum dorsale elliptico-oblongum, obtusum; petala obovato-suborbiculata, 3-nervia; labellum 3-callosum, 3-lobatum, lobis lateralibus falcatis, obtusis, lobo medio quadrato, ad angulos rotundato, at apicem dente sive mucrone instructo.

Epiphytes apparently pendulous, with elongated fusiform recurved pseudobulbs. Pseudobulbs 3–4 cm. long, about 3 mm. in diameter, clothed by nigro-punctate, loose sheaths. Leaves linear-oblong, acuminate, apiculate, many-nerved, 10–12 cm. long, 10–14 mm. wide. Petioles slender, 18 mm. long. Peduncles shorter than the leaves. Racemes 2.5–4 cm. long, rather loosely flowered. Bracts 3 mm. long, longer than the ovary. Flowers 10–13 or more, 3 mm. apart, rather fleshy, 6 mm. across when

spread out. Lateral sepals ovate, obtuse, 3-nerved, 4.5 mm. long. Upper sepal elliptic-oblong, 4 mm. long. Petals 4 mm. long, 2.5 mm. wide, obovate, suborbicular, 3-nerved. Lip 3-lobed, from base to tip of mid-lobe 1–1.5 mm. long; lateral lobes falcate, obtuse; middle lobe quadrate, rounded at the angles, with a tooth or mucro at the apex. At the base of each lateral lobe is a thickened callus-like plate, and near the middle of the lip a small tubercle.

From Mt. Data, Distr. Lepanto, Luzon, November, 1905, Elmer D. Merrill (No. 4584).

Acoridium recurvum is most nearly allied to *A. pumilum* Rolfe, although much larger in foliage, and quite different from it in habit. The flowers are fleshy, nearly opaque, and red-brown when dry. The recurved pseudobulbs, which arise from a creeping branched rhizome, and the densely spotted sheaths, which clothe the immature pseudobulb and conceal the petiole and leaf-base, are characters which distinguish this species clearly from all other species of *Acoridium* thus far discovered in the Philippine Islands.

Acoridium philippinense sp. nov.

Pseudobulbi pyriformes; folia oblongo-lanceolata, 5-nervia; sepala lateralalia oblongo-lanceolata, acuta, 3-nervia; petala rhombiformi-ovata, 3-nervia; labellum 3-lobatum, ecallosum, lobis lateralibus lineari-lunatis, obtusis, quam lobo medio minoribus, lobo medio oblongo, obtuso.

Pseudobulbs 2 cm. long, somewhat pyriform, monophyllous. Sheaths inflated, nigro-punctate when dry, round, acute at the apex. Petiole 5–6 cm. long, slender. Leaf oblong-lanceolate, acute, strongly 5-nerved, 8.5–11 cm. long, 16–23 mm. wide, broadest above the middle. Peduncle shorter than the petiole and leaf, or longer, 12–16 cm. long, slender. Inflorescence 5–10 cm. long, 1 cm. through. Flowers in a dense raceme, about 2 mm. apart. Bracts glumaceous, longer than the ovary, 2.5 mm. long. Flowers bright yellow, emitting an odor which recalls the smell of freshly sawed pine lumber. Lateral sepals oblong-lanceolate, acute, 4.5 mm. long, 2 mm. wide, 3-nerved. Upper sepal similar, narrower, 4.5 mm. long. Petals rhombic-ovate, acute, 3-nerved, 3.5 mm. long, 2.5 mm. wide. Lip 3-lobed, lateral lobes linear-crescent shaped, obtuse, erect, 1 mm. long, much narrower than the broad oblong-lingulate middle lobe, which is trulliform when not flattened out, blunt at the apex and thickened at the base. Column exalate, 9 mm. long, stout, fleshy; apex rounded.

From between Suyoc and Panai, Prov. Benguet, Luzon, alt. about 6,500 ft., epiphyte, November 7, 1905, Elmer D. Merrill (No. 4757).

This very distinct species belongs to a group of odd forms which appear to have equal affinity with the sections *Platyclinis* and *Euacoridium*.

Acoridium turpe sp. nov.

Pseudobulbi pyriformes; folia oblongo-lanceolata, acuminata, acuta; sepala lateralalia ovato-lanceolata, acuta; sepalum dorsale oblongo-ovatum, obtuse; petala ovato-acuta, 3-nervia; labellum 3-lobatum, lobis lateralibus

bene minutis, rotundatis, ad basim labelli approximatis, lobo medio magno, semi-orbiculari, 3-tuberculato.

Pseudobulbs slender pyriform, about 2.5 cm. long. Leaves 9–14 cm. long, 7–18 mm. wide, oblong-lanceolate, acuminate, acute. Petiole 4–7 cm. long. Peduncle shorter than the leaves, flexuose. Bracts glumaceous, 3–4 mm. long. Flowers yellowish, odorless. Lateral sepals ovate-lanceolate, acute, 3 mm. long, 2 mm. wide. Upper sepal oblong-ovate, obtuse, or sub-acute, 3 mm. long. Petals ovate-acute, 3-nerved. Lip 3-lobed; lateral lobes minute, rounded, basal; middle lobe relatively very long, 2 mm. wide, semi-orbicular, about 1 mm. long, trituberculate, with a tubercle on each side at base near the sinus formed by the lateral lobes and with a papillate tubercle between them. Column stout.

From between Suyoc and Panai, Prov. Benguet, Luzon, epiphyte in mossy forest, alt. about 6,500 ft., November 7, 1905, Elmer D. Merrill (No. 4758).

The lip although unlike those of all other species of *Acoridium* is of great interest inasmuch as the tubercles are in character and location similar to those of such species as *A. pumilum* and *A. venustum*. In habit the plant resembles *A. Whitfordii* and *A. philippinense*.

***Acoridium oliganthum* sp. nov.**

Pseudobulbi pyriformes; folia oblonga, sub-acute vel obtusa, quam pedunculo breviora; sepala lateralalia late ovata, obtusa, 3-nervia; sepalum dorsale oblongum, obtusum, 3-nervium; labellum sagittatum, 3-lobatum, 3-callosum, lobis lateralibus obtusis.

A diminutive epiphyte with roundish or pyriform, rugose pseudobulbs 5 mm. long, 3.5 mm. thick. Leaves shortly petiolate, 1.7–2 cm. long, 3–5 mm. wide, sub-acute or obtuse. Peduncles longer than the leaves, flexuose, filiform, few flowered. Bracts about 2 mm. long, exceeding the ovaries. Flowers small, brownish-red, orange when dry. Lateral sepals broadly ovate or orbicular-ovate, obtuse, 3-nerved, 2 mm. long, by about 2 mm. wide. Upper sepal oblong, broadest above the middle, obtuse, 3-nerved, 3-mm. long. Petals broadly cuneate-obovate, broadest above the middle, 3-nerved, obtuse or sub-acute, 2 mm. long, slightly more than 2 mm. wide. Lip contracted-sagittate, 3-lobed, with the middle-lobe bluntly apiculate or obscurely 3-lobed and the lateral lobes blunt and rounded with a large truncate tubercle at the base of each near the outer margin, and on the median line or disc of the lip a minute, very obscure papilla. Column short, with a very prominent protuberance in front.

From Mt. Data, Distr. Lepanto, Luzon, alt. 7,000 ft., October 29, 1905, Elmer D. Merrill (No. 4481).

In the Herbarium of the Bureau of Science at Manila this species and *A. ocellatum* are mounted on the same sheet. Both species were collected by Mr. Merrill at the same time. Only four plants were found, two of each species. *A. oliganthum* belongs to that group of *Euacoridium* species which have the lateral lobes of the lip much smaller than the middle lobe and which merge with *A. Whitfordii* and *A. ocellatum*.

***Acoridium ocellatum* sp. nov.**

Pseudobulbi pyriformes; folia oblonga, obtusa; sepala lateralia ovata, obtusa; sepalum dorsale elliptico-oblongum, obtusum; petala ovata; sepala petalaeque ocellata; labellum incrassatum, 3-callosum, pentagulare, acutum.

A diminutive, coriaceous-leaved species with ocellate sepals and petals. Pseudobulbs 1 cm. long, about 5 mm. thick, ovate-oblong or pyriform, strongly rugose. Leaves shortly petiolate, oblong, 3.5–4.5 cm. long, 5–6 mm. wide, obtuse. Petioles 5 mm. long. Peduncle about as long as the leaves, few flowered. Bracts 3 mm. long, erose-margined, longer than the ovaries. Lateral sepals ovate, obtuse, 2 mm. long, 1 mm. wide. Upper sepal elliptic-oblong, obtuse, 2 mm. long, 3-nerved, the nerves branched. Petals ovate, about 2 mm. long, 1 mm. wide, like the sepals provided with diaphanous areolae or ocelli scattered among the semi-opaque tissues. Lip fleshy, about 1 mm. long, 1.5 mm. wide, pentangular, acute, the apical angle forming a triangular tooth; near the center on the median line a minute papilla is situated between two truncate tubercles. Column short and stout.

From Mt. Data, Distr. Lepanto, Luzon, alt. 7,000 ft., epiphyte with brownish-red flowers, October 29, 1905, Elmer D. Merrill (No. 4481a).

Acoridium ocellatum is readily distinguished from all other Philippine species of the section *Euacoridium* by the scattered ocelli on the sepals and petals.

***Acoridium Merrilli* sp. nov.**

Pseudobulbi fusiformes; folia oblongo-lanceolata, acuta; sepala lateralia lineari-lanceolata, acuta; petala oblongo-lanceolata, quam sepalis breviora, margine minute denticulata; labellum 3-lobatum, lobis lateralibus rotundatis, quam lobo medio emarginato minoribus.

Near *Dendrochilum exalata* J. J. Smith. Pseudobulbs clustered, monophyllous, 2–2.5 cm. long, fusiform, grooved and furrowed when dry, sheaths 2.5–7 cm. long, maculate, acute. Leaf oblong-lanceolate, acuminate, acute, 11–14 cm. long, about 2 cm. wide. Petiole 2.5–3.5 cm. long. The prominently nerved lamina of the leaf, which becomes very dark in color when dried, passes abruptly into the petiole. Peduncle very slender, 0.5 mm. in diameter, naked, without imbricating bracts at the summit below the inflorescence, equalling the leaf or slightly shorter. Inflorescence a loose, graceful, comparatively large-flowered raceme, 1 dm. long, 1.5–2 cm. through. Floral bracts linear-lanceolate, acute, about 3 times longer than the ovary and pedicel, 4–7 mm. long, the slender awn-like apical portion up-curved. Flowers 4 mm. apart. Lateral sepals linear-lanceolate, acuminate, acute, carinate, 3-nerved, 9 mm. long, 2 mm. wide, spreading; upper sepal similar to the lateral ones, of equal length with them. Petals oblong-lanceolate, microscopically and irregularly toothed along the margin, acute, 3-nerved, 6 mm. long. Labellum with 3 thickened nerves, ecallose, 5 mm. long, 3-lobed, the apical lobe much the largest, 3 mm. long and broad, rounded, blunt and emarginate, lateral lobes nearly half round, minutely toothed, obliquely erect. Column rather stout, 2.5 mm. long, apex minutely crenulate, about midway in front a membranaceous protuberance. Fruit not seen.

From Mt. Data, Distr. Lepanto, Luzon, November, 1905, E. D. Merrill (Nos. 4585 (type) and 4858).

This very distinct species, which shows clearly its affinity with *Platyclinis Kingii* Hook f. (Icones Pl. 2015) and with *Dendrochilum exalatum* J. J. Smith, from which it is readily distinguished by its very different labellum, is represented by two collections made by Elmer D. Merrill on Mt. Data, on the island of Luzon. It is a most interesting addition to the group standing between *Platyclinis* and *Euacoridium*, having the habit of the former and the gynostemium of the latter.

§ 2. PLATYCLINIS.

Acoridium longilabre sp. nov.

Pseudobulbi oblongo-fusiformes; folia lineari-oblancoolata, obtusa, mucronata, valde 3-nervia; perianthii membra inter se fere aequalia, lineari-oblonga, obtusa vel sub-acuta; labellum integrum, quam sepalis petalisque latius, ad basim 2-lamellatum.

Pseudobulbs 13-33 mm. long, oblong-fusiform, clothed by nigro-punctate sheaths. Leaves linear-oblancoolate, obtuse, mucronate, about 26 cm. long, 15-18 mm. wide, prominently 3-nerved, the lateral nerves giving the leaf the appearance of being marginate-winged. Lamina decurrent on the petiole, which is 10 cm. long. Peduncle shorter than the leaves and petioles, slender, flexuose, 20-30 cm. long. Flowers reddish-brown when dry, in dense, spicate, cylindrical racemes. Racemes 7-8 cm. long. Bracts 4-5 mm. long, subacute, exceeding the ovary. Divisions of the perianth about equally long, obtuse or sub-acute, linear-oblong. Lip much broader than the sepals and petals, margin entire, 5-8 mm. long, 2 mm. wide; at base, on the lateral nerves two lamellae, 1 mm. long. Apical wing of column quadrate, the summit irregularly and minutely crenulate, lateral wings from above the middle of the column.

From Mt. Apo, Mindanao, alt. 5,600 ft., solitary or clustered on mossy trees, April 19, 1904, E. B. Copeland (No. 1025).

Acoridium graciliscapum sp. nov.

Pseudobulbi fusiformes; folia linearia, obtusa; sepala lateralibus oblongo-lanceolata, sub-acuta, 1-nervia; petala lineari-oblonga, obtusa, 1-nervia; labellum oblongum, integrum, bicallosum ad basim; lacinia lateralibus apud summam columnam affixa.

Pseudobulbs fusiform, 1.5-2 cm. long, clothed by closely appressed, nigro-punctate sheaths. Leaves linear, tapering at both ends, obtuse, 10-15 cm. long, 5-6 mm. wide, petiolate. Peduncles shorter than the leaves, about 15 cm. long, filiform. Raceme densely flowered, 4.5 cm. long, about 5 mm. through. Bracts broadly ovate, obtuse, about 1 mm. long. Flowers small. Lateral sepals oblong-lanceolate, sub-acute, 2 mm. long, about 1 mm. wide. Petals slightly shorter than the sepals, linear-oblong, obtuse, 1-nerved. Lip oblong, entire, bicallose, 2 mm. long. Column short, stout, apex obscurely 4-lobed or crenulate, lateral arms erect, arising from near the summit of the column, much exceeding the terminal wing.

From the trail to Mt. Apo, Distr. Davao, Mindanao, alt. 5,400 ft., epiphyte in large clumps on mossy trees, April 19, 1904, E. B. Copeland (No. 1019).

***Acoridium cucullatum* sp. nov.**

Pseudobulbi semifusiformes; folia lineari-lanceolata, obtusa; pedunculi quam foliis longiores; sepala lateralia lanceolata, acuta, 1-nervia; petala oblonga, obtusa, 1-nervia; labellum incrassatum, 3-callosum, aliquanto hastatum, obtusum, margine crenulata, callo medio cucullato; laciniae columnae supra medium positae; lacinia media obscure 5-6 dentata.

Pseudobulbs semi-fusiform, 18 mm. long, clothed by closely appressed nigro-punctate sheaths. Leaves linear-lanceolate, obtuse 4.7-9 cm. long, 6-8 mm. wide. Petiole 1.5-3 cm. long. Peduncles slender, longer than the leaves. Flowers in slender, rather densely flowered racemes. Bracts 1.5 mm. long, obtuse. Lateral sepals lanceolate, acute, 1-nerved, 2 mm. long, about 1 mm. wide. Upper sepal oblong, acute, 2 mm. long, 1 mm. wide. Petals oblong, obtuse, 1.5 mm. long, less than 1 mm. wide. Lip fleshy, somewhat hastate, obtuse, 1 mm. long, with ocellate cells along the crenulate margin, 3-nerved at base with a transverse, somewhat cucullate callus, in front of which at each side is a small papilla. Column short, stout, lateral wings above the middle exceeding the middle wing which is shortly and obscurely 5-6 toothed. All of the perianth organs characterized by scattered ocellate cells.

A single unnumbered specimen in Herbarium of the Bureau of Science, Manila. From Mt. Apo, Mindanao, alt. 6,000 ft., on mossy trees, April 21, 1904, E. B. Copeland (marked type).

***Acoridium Copelandii* sp. nov.**

Pseudobulbi oblongi; folia rhombiformi-lanceolata, acuminata, obtusa vel sub-acuta, plurinervulosa; sepala lateralia ovato-lanceolata, acuta, 3-nervia; petala oblonga, acuta; labellum integrum, late lanceolatum, ecallosum; laciniae apud summam columnam; lacinia terminalis 3-lobata.

Pseudobulbs oblong, narrowed above, 33-43 mm. long. Leaves lanceolate, acuminate, obtuse-subacute, many-nerved, 9-17 mm. long, 18-25 mm. wide. Petiole 4-5 cm. long, grooved. Peduncle 8-9 cm. long, shorter than the leaf. Inflorescence an elongated, slender, many-flowered raceme, 5 mm. through, about 10 cm. long. Bracts 3 mm. long, obtuse, longer than the ovary. Flowers about 1 mm. apart. Lateral sepals ovate-lanceolate, acute, 3-nerved, 2.5 mm. long. Upper sepal similar to the laterals. Petals oblong acute, 2 mm. long. Lip entire, broadly lanceolate, obtuse or sub-acute, ecallose. Column stout, 1.5 mm. long, lateral wings from near the summit, end wing 3-lobed.

A single unnumbered specimen in the Herbarium of the Bureau of Sciences, Manila, from Distr. Zamboanga, Mindanao, E. B. Copeland, 1905 (marked type).

I have not seen *Acoridium bistortum* (Krzl.) Rolfe, but *A. Copelandii* must be closely allied to it according to the figure in *Xenia Orchidacea*, pl. 299, fig. 1, 1-5, although the inflorescence is very different.